

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-91. (Canceled).

Claims 92-131. (Canceled).

132. (New) Apparatus for the treatment of obstructive sleep apnea, comprising:

a continuous positive airway pressure device;

a flexible tube; and

a humidifier including:

a humidifier base,

a humidifier lid,

a humidifier tank, and

a humidifier heater plate;

the continuous positive airway pressure device and the humidifier are releasably connected by a latch;

the humidifier lid includes an air delivery portion adapted to mate with the flexible tube;

the humidifier lid and the humidifier base are connected by a hinge adapted to allow the humidifier lid to rotate between a closed position and an open position;

the humidifier lid and the humidifier base include a locking mechanism adapted to releasably hold the humidifier lid in a closed position;

the humidifier base is adapted to receive the humidifier tank when the humidifier lid is in an open position and to locate the humidifier tank in heat transfer communication with the humidifier heater plate, and to define a gas flow path between the continuous positive airway pressure device, the humidifier tank and the flexible tube when the humidifier lid is in a closed position.

133. (New) The apparatus of claim 132 further comprising a tank lid.

134. (New) The apparatus of claim 132 wherein the humidifier base defines a first gas flow path between the continuous positive airway pressure device and an interior of the humidifier tank, and a second gas flow path between the interior of the humidifier tank and the flexible tube.

135. (New) A humidifier comprising:

a latch adapted to releasably engage the humidifier with a continuous positive airway pressure device;

an air inlet adapted for sealable connection to an outlet of the continuous positive airway pressure device and being further adapted to receive a supply of air at positive pressure from said continuous positive airway pressure device through said inlet;

a heater plate;

a water tank adapted to receive the supply of air at positive pressure and adapted to be in heat transfer communication with the heater plate, said water tank having a water tank lid;

a humidifier air outlet adapted to mate with a flexible tube to deliver the supply of air at positive pressure to a mask; and

wherein said humidifier is constructed and arranged to removably locate the water tank without disconnection of said flexible tube.

136. (New) Humidifier comprising
a water tub having a water tub lid,
a humidifier base having a water tub receiving portion; and
a humidifier lid having an outlet adapted to mate with an air delivery conduit;
wherein the humidifier lid is adapted to be in pressurized sealing relationship with the water tub lid to allow a flow of air from the water tub to the air delivery conduit when the humidifier lid is in a closed position.

137. (New) The humidifier of claim 136 wherein the humidifier lid is a hinged lid.

138. (New) The humidifier of claim 136 wherein the lid is connected to the humidifier base by hinges.

139. (New) A breathable gas supply apparatus for treatment of respiratory disorders comprising:

a continuous positive airway pressure device adapted for releasable connection to a humidifier; and

a humidifier comprising:

a humidifier base having an aperture adapted to receive a supply of breathable gas from the continuous positive airway pressure device;

a first seal extending about the aperture;

a water tub having an air inlet and an air outlet, and respective flat surfaces surrounding the air inlet and air outlet;

a humidifier lid with an air delivery portion adapted to mate with an air delivery conduit so that the supply of breathable gas can be provided to a patient interface;

a second seal located on an underside of the humidifier lid;

wherein the first seal is adapted to be in sealing relationship with the flat surface surrounding the air inlet of the water tub when the water tub abuts the first seal; and

the second seal is adapted to be in sealing relationship with the flat surface surrounding the air outlet of the water tub when the humidifier lid is a closed position.

140. (New) A respiratory treatment device comprising a flow generator and a humidifier adapted to receive a supply of air at positive pressure from the flow generator and deliver it to an air delivery conduit;

the humidifier includes a base, a humidifier lid and a water tank, and the water tank includes a water tank lid;

the water tub is removably and sealably receivable in the base to define an air flow path from the flow generator to an interior of the water tank;

the humidifier lid is connectable to the air delivery conduit, and is adaptable to form a seal with the water tank lid to define an air flow path from the interior of the water tank to the air delivery conduit.

141. (New) The respiratory treatment device of claim 140 constructed and arranged to allow removal of the water tank without detaching the air delivery conduit from the humidifier lid.

142. (New) The device of claim 140 wherein the water tank further comprises a rear first aperture constructed and arranged to align with an opening in the humidifier when the water tank is located in the base to receive the supply of air at positive pressure from the flow generator therethrough.

143. (New) The device of claim 142 wherein the water tank includes a first flat surface surrounding the rear opening.

144. (New) The device of claim 143 wherein the humidifier base includes a seal adapted to abut the first flat surface of the water tank in a locus surrounding the rear opening to create a sealed air path from the flow generator to the water tank.

145. (New) The device of claim 140 wherein the humidifier lid is constructed and arranged to seal against the water tank lid to form an air path between the interior of the tank and the air delivery conduit when the lid is in a closed position.

146. (New) The device of claim 140 wherein the humidifier lid further comprises a seal.

147. (New) The device of claim 146 wherein the seal comprises a removably attachable gasket.

148. (New) The device of claim 147 wherein the seal comprises a curved sealing flange.

149. (New) The device of claim 140 wherein the water tank lid comprises an air outlet second aperture and a second flat surface adjacent said an air outlet aperture.

150. (New) The device of claim 148 wherein the curved sealing flange is adapted to seal against the second flat surface of the water tank lid when the humidifier lid is in a closed position.

151. (New) The device of claim 140 wherein the humidifier comprises an outlet pipe arranged at an acute angle to the lid.

152. (New) The device of claim 140 wherein the humidifier lid is pivotally mounted to the base.

153. (New) The device of claim 152 wherein the lid is rotatable through a first angle to define a first travel range, and upon rotation through an angle in a second range, said second

range being angularly further than the first travel range, the lid is adapted to flexurly release from the base.

154. (New) The device of claim 140 wherein the water tank lid is structured to define an arcuate air flow path for air received from the flow generator.

155. (New) The device of claim 154 wherein the arcuate air flow path is U-shaped.

156. (New) The device of claim 140 wherein the humidifier lid further comprises a locking mechanism.

157. (New) The device of claim 156 wherein the locking mechanism is configured to retain the humidifier lid in sealing relationship with the water tank lid when the locking mechanism is engaged.

158. (New) The device of claim 140 wherein the humidifier is removably attachable to the flow generator.

159. (New) The device of claim 158 further comprising a latch to retain the humidifier to the flow generator.

160. (New) The device of claim 145 adapted to press the water tank and the water tank lid rearwards when the humidifier lid is closed.

161. (New) A humidifier adapted for interconnection between a continuous positive airway pressure device and a flexible tube for delivery of a supply of humidified breathable gas to a patient for treatment of obstructive sleep apnea, and to define an air flow path between the continuous positive airway pressure device and the flexible tube, the humidifier having a water tank and the humidifier being constructed and arranged to allow removal of the water tank for refilling with water without disconnection of the flexible tube, wherein the water tank is configured to be in sealing relationship with the air flow path when an inlet to the water tank abuts a first seal of the humidifier and a lid of the humidifier is pressed against an outlet of the water tank.

162. (New) The humidifier of claim 161 wherein the lid of the humidifier further comprises a second seal located on an underside of the lid.

163. (New) The humidifier of claim 161 wherein the lid of the humidifier is structured to rotate about a hinge between an open position and a closed position.

164. (New) The humidifier of claim 162 wherein the water tank is configured to be in sealing relationship with the second seal when the lid of the humidifier is in a closed position.

165. (New) A water tank for a heated humidifier comprising:
a base and a lid coupled to the base,
a seal between the base and lid,

an inlet orifice and a flat surface surrounding the inlet orifice,
an outlet, and
a metal portion provided to the base:
wherein a correct filling height is indicated by filling level gradations scribed or
otherwise marked on a wall of the tank.

166. (New) A method of sealably locating a humidifier water tub in a humidifier base comprising:

positioning a rear surface of the humidifier water tub to abut a humidifier seal to form a sealed air path from a flow generator outlet into an interior of the water tub; and

pressing a lid of the humidifier onto a top surface of the humidifier water tub to form a sealed air path between an interior of the humidifier water tub and an air delivery conduit.

167. (New) The method of claim 166 further comprising rotating the lid of the humidifier from an open position to a closed position.

168. (New) The method of claim 167 further comprising rotating the lid of the humidifier about a hinged connection.

169. (New) The method of claim 166 further comprising closing the lid of the humidifier using a pivoting movement.

170. (New) The method of claim 166 further comprising engaging a humidifier lid locking mechanism.

171. (New) The method of claim 166 whereby positioning the rear surface of the humidifier water tub to abut a humidifier seal comprises positioning the humidifier water tub so that the humidifier seal abuts a rear opening of the humidifier water tub in a locus surrounding the rear opening of the humidifier water tub.

172. (New) The method of claim 166 further comprising pressing the humidifier water tub rearwards.

173. (New) In a humidifier having a tank and a humidifier lid, a method of filling the tank with water comprising:

leaving an air delivery tube connected to the humidifier lid;
releasing a locking mechanism of the humidifier lid;
rotating the humidifier lid from a closed position to an open position;
removing the tank from a humidifier base;
removing a lid of the tank; and
filling the tank with water.

174. (New) A humidifier for delivering humidified breathable gas to a patient, including a humidifier case having a hinged lid, a water container adapted for drop-in assembly in said case, a heater in heat transfer communication with said water container, a gas flow path

including a gas inlet, a humidified gas outlet and an intermediate gas flow path which contacts the gas with water vapour from said container, wherein said water container has a gas passage inlet communicating with said gas flow path, said humidifier further including a gas passage inlet seal for sealing connection said gas passage inlet to said gas flow path, wherein said sealing connection is actuated by drop-in assembly of said water container and hinged closing of said lid.

175. (New) A humidifier according to claim 174, wherein said gas passage inlet is located on a rear face of said water container and aligns with a gas passage aperture on an opposed face of said case.

176. (New) A humidifier according to claim 175, wherein closing of said lid pushes said water container rearwards to actuate said sealing between the gas passage inlet of the water container and said gas passage aperture of said case.

177. (New) A humidifier according to claim 176, wherein said gas passage inlet seal is attached to said gas passage aperture and wherein closing said lid pushes the water container onto said gas passage inlet seal causing sealing contact between said seal and said rear face in a locus surrounding said gas passage inlet.

178. (New) In a humidifier assembly for a flow generator used in delivery of a supply of breathable gas to a patient for treatment of sleep disordered breathing, the humidifier assembly comprising a water tub having an inlet, a base having a blower outlet and a water-tub-

receiving-portion, and a hinged lid with an engagable locking mechanism, a method of forming a seal between the water tub inlet and the blower outlet of the base comprising:

- (i) placing the water tub in the tub-receiving-portion of the base so as to position the inlet and the outlet adjacent one another;
- (ii) closing the hinged lid; and
- (iii) engaging the locking mechanism.

179. (New) The method of claim 178 wherein the blower outlet includes front-facing seal forming surface.

180. (New) The method of claim 179 whereby placing the water tub in the water- tub-receiving portion of the base further includes placing the water tub against the seal forming surface of the blower outlet.

181. (New) The method of claim 178 wherein the hinged lid further comprises a generally cylindrical portion adapted to mate with an air delivery conduit so that the supply of breathable gas can be provided to a patient interface.

182. (New) In a humidifier assembly for a flow generator used in delivery of a supply of breathable gas to a patient for treatment of sleep disordered breathing, the humidifier assembly comprising a water tub having an air outlet and an hinged lid with an engagable locking mechanism and an air delivery portion adapted to mate with an air delivery conduit so

that the supply of breathable gas can be provided to a patient interface, a method of forming a seal between the water tub air outlet and the air delivery portion comprising:

- (i) closing the hinged lid; and
- (ii) engaging the locking mechanism.

183. (New) The method of claim 182 wherein the hinged lid has an underside, and the underside includes a seal forming surface.

184. (New) The method of claim 183 wherein the seal forming surface comprises a removably attachable gasket.

185. (New) The method of claim 184 wherein the removably attachable gasket is formed of silicone.

186. (New) A humidifier assembly for a flow generator used in delivery of a supply of breathable gas to a patient for treatment of sleep disordered breathing, the humidifier assembly comprising a water tub having an air inlet and an air outlet, a humidifier base having a blower outlet and a water-tub-receiving portion, and a lid having an air delivery portion adapted to mate with an air delivery conduit so that the supply of breathable gas can be provided to a patient interface, wherein said water-tub-receiving portion and water tub have complementary formations adapted to guide drop-in positioning of said water tub to align said air inlet with said blower outlet.

187. (New) A humidifier according to claim 186 wherein said complementary formations further guide positioning of said water tub to align said air outlet with a position of said air delivery portion of said lid when said lid is closed.

188. (New) A humidifier for delivering humidified breathable gas to a patient, including a humidifier case having a lid, a water container within said case, a heater in heat transfer communication with said water container, a gas flow path including a gas inlet, a humidified gas outlet in said lid and an intermediate gas flow path which contacts the gas with water vapour from said container, and a gas outlet seal operatively associated with said lid whereby closing said lid creates a sealed communication between said humidified gas outlet the seal and a gas space of said water container.

189. (New) A humidifier according to claim 188 wherein said gas outlet seal is attached to an underside of said lid and contacts said water container when said lid is closed.

190. (New) A humidifier according to claim 189 wherein said gas outlet seal contacts an upper surface of said water container in locus surrounding an outlet of said gas space.

191. (New) A humidifier according to claim 190 wherein said lid is hinged to said case.

192. (New) A humidifier according to claim 189 further including a gas passage seal attached to the underside of said lid cooperating with a surface of said water container to form a sealed gas passage between a gas passage inlet and a gas inlet to said gas space.

193. (New) A humidifier according to claim 192 wherein said water container surface forming said sealed gas passage includes a channel in an upper surface of said water container.

194. (New) A humidifier according to claim 192 wherein said gas outlet seal and said gas passage seal are integrally formed.

195. (New) The humidifier of claim 135, further comprising a base to receive the water tank, the outlet remaining with the base when the tank is removed.

196. (New) The humidifier of claim 136, wherein the humidifier lid is adapted to be pivotally rotated to an open position to allow removal and/or insertion of the water tub from the water tub receiving portion of the humidifier base.